

love-37

maadqgiftnsvtlspvegsrtggtlprrafrrscdrchaqkikctgnkevtgrapcqrcqragl
 rcvysercpkrrlrqsraadlvsadpdpc1hmssppvpsqslpldvseshsntsrqfldppdsy
 dwsmtsigtdeaidtdcwglscqcdggfscqleptlpdpspfestvekaplppvssdiaraasaq
 relffdl savsgeleeillavtvewpkqeiwthpigmffnasrlltv1rqqaqadchqgtldec
 lrtknlftavhcyilnvriltaiselllsqirrtqnshmsplegsrsqspqrddtsssghscvd
 tipffsenlpigelfsyvdplthalfsacttlhvgvql1reyeitlgihsaqgiaasismsgcpg
 ediartgatnsarceeqpttpaarv1fmflsdegafqeqaksagsrgrtiaalrrcyedifslark
 hkhgmlrdlnnipp (SEQ ID NO:61)

love-38

maadqgiftnsvtlspvegsrtggtlprrafrrscdrcharkikctgnkevtgrapcqrcqqagl
 rcvysercpkkrkrlrqsraadlvsadpdpc1hmssppvpsqslpldvseshsntsrqfldppdsy
 dwsmtsigtdeaidtdcwglscqcdggfscqleptlpdpspfestvekaplppvssdiaraasaq
 relffdl savsgeleeillavtvewpkqeiwthpigmffnasrlltv1rqqaqadchqgtldec
 lrtknlftavhcyilnvriltaiselllsqirrtqnshmsplegsrsqslsrddtsssghssvd
 tipffsenlpidelfsyvdplthalfsacttlhvgvql1reneitlgvhshaqgiaasismsgelg
 edivrtgatnsarceeqpttpaarv1fmflsdegafqeqaksagsrsrtiaalrrcyedifslark
 hkhgmlrdlnnipp (SEQ ID NO:62)

love-39

maadqgiftnsvtlspvegsrtggtlprrafrrscdrchaqkikctgnkevngrapcqrcqqagl
 rcvysercpkkrkrlrqsraadlvsadpdpc1hmssppvpsqslpldiseshssntsrqfldppdsy
 dwsmtsigidaeaidtdcwglscqcdggfscqleptlpdpspfestvekaplppissdiaraasaq
 relffdl savsgeleeillavtvewpkqeiwthpigmffnasrlltv1rqqaqadchqgtldec
 lrtknlftavhcyilnvrilaaiselllsqirrtqnshmsplegsrsqspqrddtsssghssvd
 tipffsenlpigelfsyvdplthalfsacttlhvgvql1reneitlgvhshaqgiaasismsgcpg
 ediartgatnsarceeqpttpaarv1fmflsdegafqeqaksagsrgrtiaalrrcyedifslark
 hkhgmlrdlnnipp (SEQ ID NO:63)

love-40

maaeqgiftnsvtlspvegsrtggtlprrafrrscdrcharkikctgnkevngrapcqrcqqagl
 rcvysercpkkrkrlrqsraadlisadpdpc1hmssppvpsqslplevseshssntsrqfldppdsy
 dwsmtsigtdkaidtdcwglscqcdggfscqleptlpdpspfestvekaplppvssditraasaq
 relffdl savsgeleeillavtvewpkqeiwthpigmffnasrlltv1rqqaqadchqgtldec
 lrtknlftavhcyildvirltaiselllsqirrtqnshmsplegsrsqspqrddtsssghssvd
 tipffsenlpigelfsyvdplrhalfsacttlhvgvql1reieitlgvhshaqgiaasismsgcpg
 ediartgatnsarceeqpttpaarv1fmflsdegtfqeqaksagsrgrtiaalrrcyedifslark
 hkhgmlrdlnnipp (SEQ ID NO:64)

love-41

maadqgiftnsvtlspvegsrtggtlprrafrrscdrchaqkikctgnkevtgrapcqrcqqagl
 rcvysercpkkrkrlrqsraadlvsadpdpc1hmssppvpsqslpldvseshsntsrqfldppdsy
 nwltmtsigtdeaidtdcwglscqcdggfscqleptlpdpspfestvekaplppvssdiaraasaq
 relffdl savsgeleeillavtvewpkqeiwthpigmffnasrlltv1rqqaqadchqgtldec
 lrtknlftavhcyilnvriltaiselllsqirrtqnshmsplegsrsqspsgddtsssghssvd
 tipffsenlpigelfsyvdplthalfsacttlhvgvql1reneitlgvhshaqgiaasismsgcpg
 ediartgatnsarceeqpttpaarv1fmflsdegafqeqksagsrgrtiaalrrcyedifslark
 hkhgmlrdlnnipp (SEQ ID NO:65)

Table 6: DNA Sequences of Variants of the *lovE* Gene***lovE*-1**

ATGGCTGCAGATCAAGGTATATTACGAACCTCGTCACTCTCGCCAGTGGAGGGTTCACGCAC
 CGGTGGAACATTACCCGCCGTGCATTCCGACGCTCTGTGATCGGTGTCATGCACAAAAGATCA
 AATGTACTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAAGCAGGCTGGACTT
 CGATGCGTCTACAGTGAGCGATGCCAAGCGCAAGCTACGCCAATCCAGGGCAGCGGATCTCGT
 CTCTGCTGACCCAGATCCCTGCTTGCACATGTCCTGCCCTCAGTGCCTCACAGAGCTGCCGC
 TAGACGTATCCGAGTCGATTCCCAAATACCTCCCAGTTCTGATCCACCGGACAGCTAC
 GACTGGTCGTGGACCTCGATTGGCACTGACGAGGCTATTGACACTGACTGCTGGGGCTGTCCA
 ATGTGATGGAGGCTCAGCTGTCAGTTAGGCCAACGCTGCCGATCTACCTCGCCCTCGAGT
 CTACGGTTGAAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCAGGCCAGTGC
 CGAGAGCTTTCGATGACCTGTCGGCGGTGCGCAGGAACGGAACTGGAAGAGATCCTCTGGCG
 GGTAGAATGGCGAAGCAGGAAACTGGACCCATCCCATCGGAATGTTCAATGCCGTACGAC
 GGCTTCTTACTGTCCTGCCAACAGCGCAGGCCACTGCCGTCAAGGCACACTAGACGAATGT
 TTACGGACCAAGAACCTCTTACGGCACTGACACTGTTACATATTGAATGTGCGGATTGACCG
 CATATCGGAGTTGCTCCTGCGCAAATTAGGCCGACCCAGAACAGCCATATGAGCCACTGGAAG
 GGAGTCGATCCAGTCGCCGAGCAGAGACACCAGCAGCAGCGGCCACAGCAGTGTGAC
 ACCATACCCTCTTAGCGAGAACCTCCCTATTGGTGAGCTGTTCCCTATGTTGACCG
 ACACGCCCTATTCTGGCTTGCACGTTACATGTTGGGATCAATTGCTCGTGTGAGAATGAGA
 TTACTCTGGGAGTACACTCCGCCAGGGCATTGCACTGCTCCATCAGCATGAGCGGGAAC
 GAGGATATAGCCAGGACAGGGCGACCAATTCCGCAAGATGCGAGGAGCAGCCGACACTCC
 GGCTCGGGTTTGTTCATGTTCTGAGTGAAGGGCTTCAGGAGGCAAAGTCTGCTGGTT
 CCCGAGGTGCAACCATCGCAGCACTGCGACGATGCTATGAGGATATCTTCCCTGCCCG
 CACAAACATGGCATGCTCAGAGACCTCAACAATATTCCCTCCATGA (SEQ ID NO: 66)

***lovE*-2**

ATGGCTGCAGATCAAGGTATATTACGAACCTCGTCACTCTCGCCAGTGGAGGGTTCACGCAC
 CGGTGGAACATTACCCGCCGTGCATTCCGACGCTCTGTGATCGGTGTCATGCACAAAAGATCA
 AATGTACTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAAGCAGGCTGGACTT
 CGATGCGTCTACAGTGAGCGATGCCAAGCGCAAGCTACGCCAATCCAGGGCAGCGGATCTCGT
 CTCTGCTGACCCAGATCCCTGCTTGCACATGTCCTGCCCTCAGTGCCTCACAGAGCTGCCGC
 TAGACGTATCCGAGTCGATTCCCAAATACCTCCGCAATTCTGATCCACCGGACAGCTAC
 GACTGGTTGTGGACCTCGATTGGCACTGACGAGGCTATTGACACTGACTGCTGGGGCTGTCCA
 ATGTGATGGAGGCTCAGCTGTCAGTTAGGCCAACGCTGCCGATCTACCTCGCCCTCGAGT
 CTACGGTTGAAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCAGGCCAGTGC
 CGAGAGCTTTCGATGACCTGTCGGCGGTGCGCAGGAACGGAACTGGAAGAGATCCTCTGGCG
 GGTAGAGTGGCCGAAGCAGGAAACTGGACCCATCCCATCGGAATGTTCAATGCCGTACGAC
 GGCTTCTTACTGTCCTGCCAACAGCGCAGGCCACTGCCATCAAGGCACACTAGACGAATGT
 TTACGGACCAAGAACCTCTTACGGCACTGACACTGTTACATATTGAATGTGCGGATTGACCG
 CATATCGGAGTTGCTCCTGCGCAAATTAGGCCGACCCAGAACAGCCATATGAGCCACTGGAAG
 GGAGTCGATCCAGTCGCCGAGCAGAGACACCAGCAGCAGCGGCCACGGCAGTGTGAC
 ACCATACCCTCTTAGCGAGAACCTCCCTATTGGTGAGCTGTTCTCCTATGTTGACCCCTGAC
 ACACGCCCTATTCTGGCTTGCACGTTACATGTTGGGATCAATTGCTCGTGTGAGAATGAGA
 TTACTCTGGGAGTACACTCCGCCAGGGCATTGCACTGCTCCATCAGCATGAGCGGGAAC
 GAGGATATAGCCAGGACAGGGCGACCAATTCCGCAAGATGCGAGGAGCAGCCGACCAACTCC
 GGCTCGGGTTTGTTCATGTTCTGAGTGAAGGGCTTCAGGAGGCAAAGTCTGCTGGTT
 CCCGAGGTGCAACCATCGCAGCACTGCGACGATGCTATGAGGATATCTTCCCTGCCCG
 CACAAACATGGCATGCTCAGAGACCTCAACAATATTCCCTCCATGA (SEQ ID NO: 67)

Love-3

ATGGCTGCAGATCAAGGTATATTACGAACCTCGTCACTCTCTGCCAGTGGAGGGTTCACGCAC
 CGGTGGAACATTACCCCGCGTGCATTCCGACGCTCTGTGATCGGTGTCATGCACAAAAGATCA
 AATGTACTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAAGCAGCAGCAGGCTGGACTT
 CGATCGTCTACAGTGAGCGACGCCAAGCGCAAGCTACGCCAATCCAGGGTAGCGGATCTCGT
 CTCTGCTGACCCAGATCCCTGCTTGACATGTCCTGCCCTCAGTGCCTCACAGAGCTGCCGC
 TAGACGTATCCGAGTCGATTCCCTCAAATACCTCCCAGCAATTCTTGATCCACCGGACAGCTAC
 GACTGGCTGATCTGGACTGACGGAGGCTATTGACACTGACTGCTGGGGCTGTCCA
 ATGTGATGGAGGCTTCAGCTGTCAAGTTAGAGCCAACGCTGCCGGATCTACCTTCGCCCTCGAGT
 CTACCGTTGAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCAGGCCAGTGCACAA
 CGAGAGCTTCGATGACCTGTCGGCGGTGCGCAGGAACCTGGAAGAGATCCTCTGGCGTGAC
 GGTAGAATGGCCGAAGCAGGAAATCTGGACCCATCCCATCGGAATGTTTCAATGCGTCACGAC
 GGCTTCTTACTGTCTGCCAACAGCGCAGGCCACTGCCATCAAGGCACACTAGACGAATGT
 TTACGGACCAAGAACCTCTTACGGCAGTACACTGTTACATATTGAATGTGCGGATTTGACCGC
 CATATCGGAGTTGCTCTGCAAAATTAGCGGACCCAGAACGCCATATGAGCCACTGGAAAG
 GGAGTCGATCCAGCTGCCGAGCAGACACCAGCAGCAGCGGCCACAGCAGTGTGAC
 ACCATACCCTCTTAGCGAGAACCTCCATTGGTGAGCTGTTCTCATGTTGACCCCCCTGAC
 ACACGCCCTATTCTCGGCTGCACTACGTTACATGTTGGGTACAATTGCTCGTGAGAATGAGA
 TTACTCTGGAGTACACTCCGCCAGGGCATTGCACTGCTCCATCAGCATGAGCGGGAAACCAGGC
 GAGGATATAGCCAGGACAGGGCGACCAATTCCGAAGATGCGAGGAGCAGCCGACACTCCAGC
 GGCTCGGGTTTGTTGTTCATGTTCTGAGTGAAGGGGCTTCCAGGAGGCAAAGTCTGCTGGTT
 CCCGAGGTCGAACCATCGCAGCAGTGCGACGATGCTATGAGGATATCTTCCCTGCCCGCAA
 CACAAACATGGCATGCTCAGAGACCTCAACAAATTCCCTCCATGA (SEQ ID NO: 68)

Love-4

ATGGCTGCAGATCAAGGTATATTACGAACCTCGTCACTCTCTGCCAGTGGAGGGTTCACGCAC
 CGGTGGAACATTACCCCGCGTGCATTCCGACGCTCTGTGATCGGTGTCATGCACAAAAGATCA
 AATGTACTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAAGCAGCAGGCTGGACTT
 CGATCGTCTACAGTGAGCGACGCCAAGCGCAAGCTACGCCAATCCAGGGCAGCGGATCTCGT
 CTCTGCTGACCCAGATCCCTGCTTGACATGTCCTGCCCTCAGTGCCTCACAGAGCTTGCCGC
 TAGACGTATCCGAGTCGATTCCCTCAAATACCTCCCAGCAATTCTTGATCCACCGGACAGCTAC
 GACTGGCTGAGCTCGATTGGACTGACGGAGGCTATTGACACTGACTGCTGGGGCTGTCCA
 ATGTGATGGAGGCTTCAGCTGTCAAGTTAGAGCCAACGCTGCCGGATCTACCTTCGCCCTCGAGT
 CTACCGTTGAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCAGGCCAGTGCACAA
 CGAGAGCTTCGATGACCTGTCGGCGGTGCGCAGGAACCTGGAAGAGATCCTCTGGCGTGAC
 GGTAGAATGGCCGAAGCAGGAAATCTGGACCCATCCCATCGGAATGTTTCAATGCGTCACGAC
 GGCTTCTTACTGTCTGCCAACAGCGCAGGCCACTGCCATCAAGGCACACTAGACGAATGT
 TTACGGACCAAGAACCTCTTACGGCAGTACACTGTTACATATTGAATGTGCGGATTTGACCGC
 CATATCGGAGTTGCTCTGCAAAATTAGCGGACCCAGAACGCCATATGAGCCACTGGAAAG
 GGAGTCGATCCAGCTGCCGAGCAGAGACACCAGCAGCAGCGGCCACAGCAGTGTGAC
 ACCATACCCTCTTAGCGAGAACCTCCATTGGTGAGCTGTTCTCATGTTGACCCCCCTGAC
 ACACGCCCTATTCTCGGCTGCACTACGTTACATGTTGGGTACAATTGCTCGTGAGAATGAGA
 TTACTCTGGAGTACACTCCGCCAGGGCATTGCACTGCTCCATCAGCATGAGCGGGAAACCAGGC
 GAGGATATAGCCAGGACAGGGCGACCAATTCCGAAGATGCGAGGAGCAGCCGACACTCCAGC
 GGCTCGGGTTTGTTGTTCATGTTCTGAGTGAAGGGGCTTCCAGGAGGCAAAGTCTGCTGGTT
 CCCGAGGTCGAACCATCGCAGCAGTGCGACGATGCTATGAGGATATCTTCCCTGCCCGCAA
 CACAAACATGGCATGCTCAGAGACCTCAACAAATTCCCTCCATGA (SEQ ID NO: 69)